

REMARKS

Claims 12-21, as amended, are before the Examiner for consideration.

1. Applicants thank the Examiner for the helpful telephone interview on July 7, 2004, which was initiated to advance prosecution. Three topics were mentioned during the interview and they are discussed below in Sections 2-4.

2. The expression "in a manner" was said not to be clear

To advance prosecution, applicants replace the expression "in a manner" with an expression that defines the anchor substance as one "that reacts predominately with said alkali metal, whereby any reaction between main components of the carrier and said alkali metal is suppressed and the deterioration of the carrier is suppressed." This characterization is supported in Paragraph [0007] on page 3 of the specification.

3. The listing of components of the catalyst body are said not to require separate materials: Na₂O is said to be able to meet the dual components of an alkali metal and a heat-resistant inorganic oxide.

The heading is believed to be the "gist" of the Examiner's point. Applicants contend that the independent claims call for a catalyst layer with three separate components. The Examiner appeared to believe those separate components read on one material that serves as two components. The Examiner gave an example where if applicants had sodium and then heated it, the sodium would oxidize to form sodium oxide. This sodium oxide was said to meet both "an alkali metal" and "a heat-resistant inorganic oxide" components of the claims.

The Encyclopedia of Chemistry, Japanese Version, teaches that Na₂O decomposes at a temperature of 400°C or more and forms Na₂O₂ and Na. The work further reports that Na₂O is hygroscopic and easily forms sodium hydroxide when reacted with water. Accordingly, Na₂O can not be used in exhaust gas purification systems because the exhaust gas definitely contains water. As a result Na₂O in this context would not be

considered by an artisan as a "heat resistant inorganic oxide."

4. Possible Prior Art showing Si and Al

The Examiner raised the possibility that Si and Al may be present in an auto exhaust catalyst. He suggested that bentonite, which contains these elements, could be used as a binder. However, bentonite is not usable in automobile purification systems because bentonite has a significant swelling property. For example, when a slurry is prepared by using bentonite for a coating, only a very small amount of this coating material will be practically carried on the honeycomb body due to the swelled volume of the bentonite in the slurry being used for coating. As a result, there will be only a quite smaller amount of the bentonite material that will remain when dried. The cross sectional area of these through channels is defined by the partition walls in the honeycomb body and that area is quite small. The artisan in the honeycomb body coating art would not use bentonite with its large swelling ratio in a slurry that is to be applied to the inner partition walls of the honeycomb.

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Applicants note also that, even if such a material was used to form the honeycomb carrier, that material would not be present in the catalyst layer as claimed in claim 12 nor in between the catalyst layer and the carrier as claimed in claim 20.

Applicants respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

Should the Examiner deem that any further action by the applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representative at the number listed below.

Respectfully submitted,

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Date

CAW:EC/klb

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